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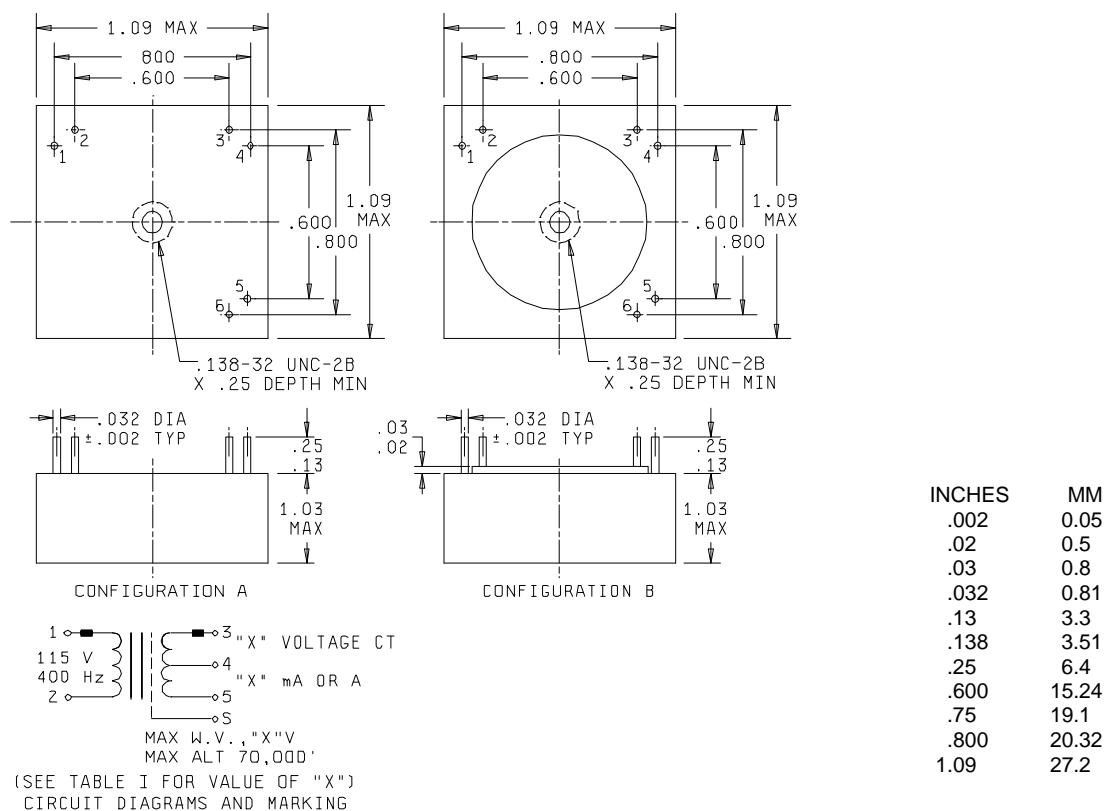
MIL-PRF-27/42B
7 February 1984
SUPERSEDING
MIL-T-27/42A
20 October 1976

PERFORMANCE SPECIFICATION SHEET

TRANSFORMERS, POWER, 6 VOLT AMPERES, 400 HZ, ELECTROSTATIC SHIELDED, TF5S03ZZ620 TO TF5S03ZZ663, INCLUSIVE

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the transformers described herein shall consist of this specification and the latest issue of MIL-T-27.



NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Tolerance on terminal position dimensions is ± 0.005 (0.13 mm).
4. Marking shall be on the side of the case.
5. A white dot shall be marked on the side opposite the terminals, over terminal 1, in addition to the terminal marking shown.
6. Secondary electrical values shall be marked as specified in table I, as applicable.

FIGURE 1. Dimensions and configuration.

(B) denotes changes

REQUIREMENTS: (When numbers in parentheses i.e. (1-2) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings: See table I.

Primary voltage (1-2): 115 volts ± 10 percent, 400 Hz ± 5 percent.

Design and construction:

Dimensions and configuration: See figure 1.

Weight: 2.2 ounces, maximum.

Duty cycle: Continuous.

Case: Plastic encapsulated.

Material: Plastic.

Altitude: 70,000 feet, maximum.

Operating temperature range: -55°C to $+130^{\circ}\text{C}$ maximum.

Terminals: Printed circuit pins - tinned brass.

Terminal strength: Method 211 of MIL-STD-202, test condition A, 2.0 pounds.

Dielectric withstanding voltage:

At sea level: 2.8 times the maximum working voltage specified in table I.

At reduced barometric pressure: 1.25 times the maximum working voltage specified in table I.

Electrical characteristics:

No load: With 115 volts, 400 Hz across (1-2): Current in (1-2) shall not exceed 9 mA rms.

Rated load: With 115 volts, 400 Hz across (1-2) and a resistive load with current as specified in table I in (3-5), the voltage across (3-5) shall be as specified in table I.

Efficiency: 80 percent minimum at rated load.

Electrostatic shielding: The voltage ratio shall be a minimum of 5 to 1 at 20 kHz.

Polarity: Additive with terminals 2 and 3 connected.

Regulation:
$$\frac{\text{Voltage (no load)} - \text{Voltage (rated load)}}{\text{Voltage (rated load)}} \times 100$$
 shall not exceed 10 percent.

Phase shift: 1.0 electrical degree between primary and secondary voltage at rated load, maximum.

Temperature rise: 25°C , maximum.

Vibration: MIL-STD-202, method 204, test condition D.

Marking location: See figure 1.

Ⓑ QUALITY ASSURANCE PROVISIONS:

Extent of qualification:

MIL-T-27/42B

Qualification testing and approval to M27/37-44 A or B, M27/42-44 A or B, and M27/46-44 A or B shall be sufficient to grant qualification approval to MIL-T-27/37 through MIL-T-27/47 inclusive, all parts.

Qualification testing and approval to M27/42-44 shall be sufficient to grant qualification approval to M27/42-01 through M27/42-44.

Part number example:

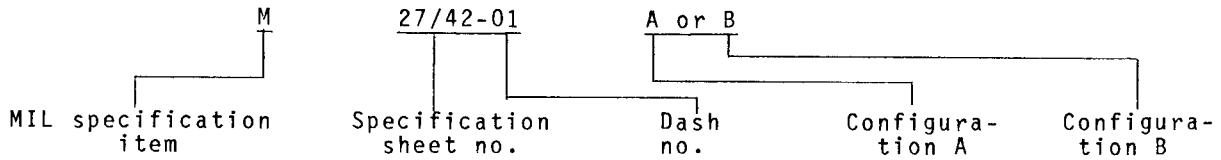


TABLE I. Electrical ratings.

Dash no.	Type designation	Secondary voltage (3-5) (V rms) $\pm 3\%$	Secondary current (3-5) (amps rms)	Working voltage (V rms max)
01 A or B	620	6	1.100	325
02 "	621	6.3	0.953	"
03 "	622	7	0.857	"
04 "	623	7.5	0.800	"
05 "	624	8	0.750	"
06 "	625	9	0.667	"
07 "	626	10	0.600	"
08 "	627	11	0.545	"
09 "	628	12	0.500	"
10 "	629	12.6	0.476	"
11 "	630	13	0.462	"
12 "	631	15	0.400	"
13 "	632	16	0.375	"
14 "	633	18	0.333	"
15 "	634	20	0.300	"
16 "	635	22	0.272	"
17 "	636	24	0.250	"
18 "	637	26	0.230	"
19 "	638	28	0.214	"
20 "	639	30	0.200	"
21 "	640	33	0.182	"
22 "	641	36	0.167	"
23 "	642	39	0.154	"
24 "	643	43	0.140	"
25 "	644	47	0.128	"
26 "	645	51	0.118	"
27 "	646	56	0.107	"
28 "	647	62	0.097	"
29 "	648	68	0.088	"
30 "	649	75	0.080	"
31 "	650	82	0.073	"
32 "	651	91	0.066	"
33 "	652	100	0.060	"
34 "	653	110	0.055	"
35 "	654	115	0.052	"
36 "	655	120	0.050	"
37 "	656	130	0.046	"
38 "	657	150	0.040	"
39 "	658	180	0.033	"
40 "	659	200	0.030	440
41 "	660	220	0.027	440
42 "	661	240	0.025	440
43 "	662	270	0.022	580
44 "	663	300	0.020	580

Custodians:

Army - ER
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - OS
Air Force - 11, 17, 99
DLA - ES

User activities:

Army - ME
Navy - MC, AS
Air Force - 19

Agent:

DLA - ES

Preparing activity:

Army - ER

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